

Claims

- [c1] What is claimed is:
1. An audio system comprising:
- a playing circuit for generating an audio signal;
- at least a speaker electrically connected to the playing circuit for playing sound according to the audio signal;
- a detector for detecting a communication signal of a mobile phone or an automobile phone and generating a corresponding mute signal; and
- a mute circuit electrically connected to the detector and the player circuit for receiving the mute signal;
- wherein the mute circuit stops the speaker from playing sound after the mute circuit receives the mute signal.
- [c2] 2. The audio system of claim 1 being an automobile audio system.
- [c3] 3. The audio system of claim 1 wherein the detector generates the mute signal when a signal voltage of the communication signal is larger than a predetermined value so as to make the mute circuit stop the speaker from playing sound.
- [c4] 4. The audio system of claim 1 wherein the detector generates the mute signal when a sustained time of the communication signal is longer than a predetermined time so as to make the mute circuit stop the speaker from playing sound.
- [c5] 5. The audio system of claim 1 wherein the communication signal is a radio communication signal.
- [c6] 6. The audio system of claim 5 wherein a frequency band of the radio communication signal is about 900 MHz.
- [c7] 7. The audio system of claim 5 wherein a frequency band of the radio communication signal is about 1800 MHz.
- [c8] 8. The audio system of claim 5 wherein the detector comprises:
- a receiver for receiving the radio communication signal;

a high-pass filter for filtering out low frequency waves of the radio communication signal;
an envelope detector electrically connected to the high-pass filter for measuring the direct current signal voltage of the communication signal and generating a corresponding voltage signal; and
a control circuit for generating the mute signal according to the voltage signal.

- [c9] 9.The audio system of claim 8 wherein the detector further comprises a delay circuit electrically connected between the envelope detector and the control circuit for delaying the voltage signal for a predetermined delay time and generating a corresponding delay signal, and the control circuit generates the mute signal according to the delay signal.
- [c10] 10.The audio system of claim 8 wherein a pass-band of the high-pass filter is over 900 MHz or 2500 MHz.
- [c11] 11.An automatic mute device for an audio system, the audio system comprising:
a playing circuit for generating an audio signal; and
at least a speaker electrically connected to the playing circuit for playing sound according to the audio signal;
the automatic mute device comprising:
a detector for detecting a communication signal of a mobile phone or an automobile phone and generating a corresponding mute signal; and
a mute circuit electrically connected to the detector and the player circuit of the audio system for receiving the mute signal;
wherein the mute circuit stops the speaker from playing sound after the mute circuit receives the mute signal.
- [c12] 12.The automatic mute device of claim 11 wherein the audio system is an automobile audio system.
- [c13] 13.The automatic mute device of claim 11 wherein the detector generates the mute signal when a signal voltage of the communication signal is larger than a predetermined value so as to make the mute circuit stop the speaker from playing sound.



- [c14] 14.The automatic mute device of claim 11 wherein the detector generates the mute signal when a sustained time of the communication signal is longer than a predetermined time so as to make the mute circuit stop the speaker from playing sound.
- [c15] 15.The automatic mute device of claim 11 wherein the communication signal is a radio communication signal.
- [c16] 16.The automatic mute device of claim 15 wherein a frequency band of the radio communication signal is about 900 MHz.
- [c17] 17.The automatic mute device of claim 15 wherein a frequency band of the radio communication signal is about 1800 MHz.
- [c18] 18.The automatic mute device of claim 15 wherein the detector comprises:
a receiver for receiving the radio communication signal;
a high-pass filter for filtering out low frequency waves of the radio communication signal;
an envelope detector electrically connected to the high-pass filter for measuring the direct current signal voltage of the communication signal and generating a corresponding voltage signal; and
a control circuit for generating the mute signal according to the voltage signal.
- [c19] 19.The automatic mute device of claim 18 wherein the detector further comprises a delay circuit electrically connected between the envelope detector and the control circuit for delaying the voltage signal for a predetermined delay time and generating a corresponding delay signal, and the control circuit generates the mute signal according to the delay signal.
- [c20] 20.The automatic mute device of claim 18 wherein a pass-band of the high-pass filter is over 900 MHz or 2500 MHz.